





### We are WJ Philippines

WJ Philippines offers a complete groundwater control and water management service throughout the country. WJ specialize in turnkey solutions with a complete design, installation, operation and maintenance service.

With over 40 years of experience and more than 3,000 projects to our name, WJ has built a strong reputation for providing professional, reliable, and technically strong design based solutions. WJ are dedicated to investing in our staff and technology to constantly develop the services we provide.

WJ Philippines works in a wide a range of sectors including Construction, Municipal, Marine & Offshore, Industrial, and Oil & Gas.

WJ services include infrastructure & basement dewatering, specialist pipeline services, water & geothermal well drilling, groundwater remediation, and pump rental services.

Get in touch with our team today for a free, no-obligation consultation.

There's no hard sell – our services sell themselves – we'll just talk through your company's needs and explain what we can do to assist you.

Get more from your free consultation by giving us as much information as you can before we start – you can email us on

info@wjphilippines.com

## Water & Groundwater Management

It is no secret that water can pose one of the largest risks to a construction project.

WJ Philippines help our clients understand and manage their groundwater risk, and provide competitive and practical solutions for all water management needs.

Proper groundwater control and management can:

- Improve working conditions
- Produce pumped water free of suspended solids
- Improve excavation stability often allowing increased angle of battered slopes
- Reduce additional temporary works measures
- Improve earthworks productivity
- Reduce environmental impacts
- Improve safety for your work force
- Reduce project costs and programme time



WJ Equipment Yard (2023)

## Dewatering of **Underground**Stations

## WJ provide underground station dewatering solutions that bring confidence to your project.

WJ use a range of dewatering techniques to control groundwater levels during excavation and construction works

Key dewatering methods used:

- Deepwells
- Wellpoints
- Sump Pumps
- Trenching and French Drains

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WJ Philippines working for Acciona-EEI Joint Venture dewatered the Clark-Malolos Railway Project and recently passed a significant project milestone with the completion of the excavation and anchoring for the 300 m long, 60 m wide, 20 m deep, Clark International Airport (CIA) station.

WJ had to overcome flows of over 400l/sec and the challenges of unforeseen stratified ground conditions to achieve the objective of the fully dewatered excavation within the sheetpile side support and provide the client with the reassurance of full external drawdown for stability. The dewatering needs to remain active during the construction phase and take into account monthly rainfall of up to 600mm during the wet season. WJ are providing a system continuous realtime monitoring accessible to the project team, with contingency pumping capacity and standby power with automatic transfer.



Malolos-Clark Railway Project (2023)



Malolos-Clark Railway Project (2023)

### Dewatering of Shafts

### WJ are the region's leading experts for dewatering of shafts.

Working for leading contractor DMCI and client Maynilad Water, who provide fresh water and sewerage services to Metro Manila, WJ enabled the successful completion of a new water inlet pumping station. The shaft, at the Camana waste water treatment plant, is 45 m diameter and 25 m deep. With groundwater levels at only 3 m below ground level and the pumping station being founded within permeable sandstone, WJ designed and installed efficient dewatering system which allowed DMCI to undertake the works entirely 'in the dry' without any need for additional pumping interrupting the excavation and placement of structural concrete.

WJ have an enviable history of successfully dewatering excavations of dewatering shaft. Our success in part comes from:

- WJ in-house design teams and modelling capability
- Investigation with pumping tests
- Careful selection of materials and equipment
- Experienced staff with the latest technology
- Ongoing monitoring and optimisation
- Built in backup and robust systems
- High environmental and safety standards



CAMANA Water Reclamation Facility (2022)



CAMANA Water Reclamation Facility (2022)

### Dewatering of Deep Excavations

WJ bring a wealth of experience dewatering Open Cut Excavations. Working with our clients to provide practical and engineered dewatering solutions that allows the completion of works on time and budget.

WJ have dewatered kilometers of open cut excavations in the nation. Deepwells and sump pumps are commonly used to control water levels. Our dewatering system is designed to allow full access for excavation works

WJ provide a range of options including:

- WJ in-house design teams and modelling capability
- Drilling and installation of deepwells
- HDPE pipework for robust discharge network
- Centralised control cabins for pump operation
- Remote water quality, flow and level monitoring



Malolos-Clark Railway Project (2022)



Malolos-Clark Railway Project (2023)

## Wellpointing - Dewatering of Shallow Excavations

#### WJ Philippines provides wellpoint system to lower groundwater levels for stable working conditions

Wellpoints are ideal for dewatering shallow foundations, excavations, and pipeline trenching. Typically installed along or around an excavation, consist of series of small diameter wells that are connected to a header pipe to a wellpoint pump creates vacuum in the header pipe drawing water up from the ground. The height to which water can be drawn by vacuum in this way is approximately 6 m. To function at greater depths, wellpoints can be installed in stages as the excavation proceeds. They can be installed quickly in most ground conditions and are easy to maintain.



Malolos-Clark Railway Project (2022)



Malolos-Clark Railway Project (2023)



Malolos-Clark Railway Project (2023)

## Treatment & Remediation Services

WJ offers water treatment & remediation services in Philippines. WJ designs, installs and operates groundwater treatment systems to clean up dirty and contaminated water

WJ treat a range of contaminants including:

- Sediment (suspended and dissolved)
- Hydrocarbons
- Biological
- Chemical
- Metals

WJ provide a range of options including:

- Sedimentation
- Filtration
- Coagulation and flocculation
- Chlorination
- Aeration and stripping

Contact our team today for a free, no-obligation consultation.

Get more from your free consultation by giving us as much information as you can before we start – email us today on **info@wjphilippines.com**.







### Well and Borehole Drilling

WJ operate a fleet of Deep Well drilling rigs and ancillaries. Our operators have drilled in a range of ground conditions.

WJ has the know-how and equipment to drill in a wide range of environments including confined spaces such as basements, tunnels and shafts. WJ have in-house geologists, geotechnical engineers, hydrogeologists and geothermal experts required for design and reporting.

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Our drilling services cover a wide range of applications:

- Water well drilling
- Deepwell & Wellpoints drilling
- Piezometer drilling
- Conductor and anode drilling
- Inclinometer drilling
- Pre-drilling for sheetpiles
- Water level monitoring piezometers

WJ can offer a host of support services including sale, installation and maintenance of borehole pumps, and well cleaning services.

Contact us today to find out how we can assist you on your drilling projects **info@wjphilippines.com**.



## Pumping Tests, In-House Design & Optimization

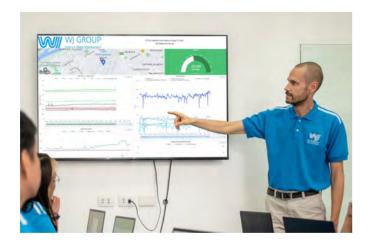
WJ provides expert advice on technical and hydrogeological issues. We undertake pumping tests, computer modelling and calculations to bring optimised solutions.

As WJ is an international contractor, with operations in over 10 countries, it benefits from local and global engineering teams that bring our clients the best in dewatering and water management design.

WJ is able to provide a range of services:

- Hydrotesting design, operation and interpretation
- 2D & 3D computer simulations
- Pipeflow modelling
- Assessment of site investigation data
- Investigation of settlement risks
- Development of control strategies
- Real-time monitoring

Find out more at our website **www.wjphilippines.com**.





## Overpumping & Surface Sump Pumping

In projects where groundwater mainly flow from rock cavities, fissures or fractures, the simplest is to use surface pumps such as diesel engine-driven or electric submersible pumps.

WJ owns and operates large fleet of pumps in various types and sizes, with capabilities ranging from 1l/s to 300l/s.





Over Pumping Project in Batangas (2022)

Surface sump pumping is one of the most common methods in controlling and managing groundwater in grounds where stability is not an issue.

- Economical and quick to install
- Applicable in wide range of flows
- Surface Water can be trenched directly towards the pumps
- Operation is simple and straightforward

WJ provides a complete turn-key design for specific pumping requirements ensuring technically and commercially feasible solution.



Over Pumping in Combined Cycle Power Plant (2023)

# Emergency Flood Control & Planning

### At WJ Philippines we understand the urgency and importance of floodwater management.

Comprehensive Flood water Control Solutions: We don't just offer equipments; we provide end-to-end floodwater control solutions. From initial assessmentand planning to on-site deployment and maintenance, WJ ensures you have a comprehensive strategy inplace.

#### Versatile Pumping Equipments:

Our fleet boasts a diverse range of pumping equipment, each meticulously maintained and regularly upgraded. This means you will always have access ti right tools for the job, whether you are dealing with minor water accumulation or major flood event.



Emergency Flood Control at NLEX in San Simon (2023)

#### Experienced Team:

Our team of seasoned professionals possesses the knowledge and expertise needed to handle floodwater situations of any scale. We work diligently to customize our solutions to meet your specific requirements.

#### Rapid Response:

Flood emergencies don't wait, and neither do we. With WJ, you can count on swift response times, 24/7 availability, and a proactive approach to mitigate potential damage.

When you partner with WJ you're not just investing in floodwater control; you are investing in peace of mind.



Emergency Flood Control at NLEX in San Simon (2023)

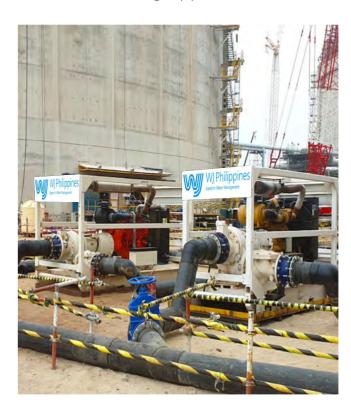
## Pipeline Flushing & Industrial Services

WJ Philippines delivers high-quality engineered pipeline and industrial services. WJ work closely with our clients to bring reliable, value-added solutions. WJ handles a wide range of pre-commissioning and commissioning services for pipelines.



WJ fluid management services include:

- Pipeline flushing and chemical cleaning
- Hydrostatic pipeline and tank testing
- HDPE pipelines (butt-fusion and electro-fusion)
- Pre-commisssioning of new pipelines
- Commissioning of new pipelines
- Calliper survey / electronic geometry
- Inline inspection / baseline survey (MFL or UT) batching support
- Decommissioning of pipelines



## Testimonials & Clients Served

#### Testimonial of DMCI:

"It's been a pleasure partnering with WJ for our CAMANA Project's Intake Structure where we were challenged on how to keep the pit dry from the excavation to construction of the liners.

WJ's Team were very professional, technical advisor were very proficient and had ready answers to our concerns, proof that WJ is an expert in this field of construction dewatering.

WJ's operators are very capable and approachable, they can explain well what is happening with the pumps and underneath. DMCI can say that we had peace of mind with WJ doing the job in the pit.

Thank you very much as we look forward to the future partnering."

Juan Jose C. Laragan Assistant Vice President (AVP) – Utilities, Plant Utilities & Plant BU

#### **Testimonial of First Balfour:**

"WJ partnered with First Balfour in dewatering requirements for the Batangas Combined Cycle Power Plant's Intake Structure.

Despite particularly challenging conditions and close proximity to the sea, WJ were able to successfully design and install appropriate dewatering system to enable excavation to be carried out.

Significant technical expertise was demonstrated in forecasting inflows and in explaining their basis.

Strong logistical support was also proven in delivery of pumps of increased capacity as project needs demanded.

We look forward to working alongside them on our future projects."

Malcolm M. Lorimer EVP - Major Projects Division

#### Testimonial of SK Ecoplant:

"All engineers for UW UK, Philippines and UAE were perfectly integrated into Korean Tunnel Recovery Project.

Their engineering solution based on professionalism and best practice was always reasonable and provided on time.

We will always remember WJ's overwhelming dedication for the project success.

Raymond Choi Construction Director – SK Ecoplant

#### Clients Served:

















### Find out more

There's so much more to tell than we can share here

For more information about WJ, our services, the sectors in which we work, our awards and accreditations, not to mention our extensive library of project case studies and white papers, please visit our websites or contact us directly.



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